# Pomona.



# Oscilloscope Probes and Accessories

Pomona's oscilloscope probes give you the full range you need. Designed, rated, and specified to match the bandwidth of your instrument, they provide you with full voltage read-out over the entire rated bandwidth of each probe.



## Replacement Passive Oscilloscope Probes

These general purpose monolithic passive voltage probes feature high performance for greater test flexibility. Complete accessory kit included.

See selection guide below.

### Monolithic Passive Oscilloscope Probes

Model#	Probe Ratio	Maximum Input Voltage CAT I ¹	System Bandwidth MHz (-3 dB)	System Risetime (ns)	Probe Input Resistance (MΩ)	Probe Input Capacitance (pF)	Compensation Range (pF)	Readout Actuator	Cable Length
5800A	1:1	300²	Up to 30 <sup>3</sup>	< 11.66 <sup>3</sup>	1	< 57 + O-Scope	NA	No	4ft (1.2m)
6265	10:1	300	60	< 5.83	10	< 10.5	10 - 60	No	4ft (1.2m)
6266	1:1 10:1	300² 300	Up to 20 <sup>3</sup> 60	< 17.5³ < 5.83	1 10	< 65 + 0-Scope < 11	NA 10 - 60	No	4ft (1.2m)
5795A	10:1	300	100	< 3.50	10	< 9.5	10 - 60	No	4ft (1.2m)
4550B	1:1 10:1	300² 300	Up to 15 <sup>3</sup> 100	< 23.33 <sup>3</sup> < 3.50	1 10	< 64 + 0-Scope < 10.5	NA 10 - 60	No	4ft (1.2m)
6049A	10:1	300	150	< 2.33	10	< 10.5	10 - 30	No	4ft (1.2m)
6101A	10:1	300	150	< 2.33	10	< 10.5	10 - 30	Yes	4ft (1.2m)
SP150B	1:1 10:1	300² 300	Up to 15 <sup>3</sup> 150	< 23.33 <sup>3</sup> < 3.33	1 10	< 50+ O-Scope < 15	NA 10 - 60	No	4ft (1.2m)
5803A	10:1	300	200	< 1.75	10	< 10	10 - 60	No	4ft (1.2m)
5806A	1:1 10:1	300² 300	Up to 20 <sup>3</sup> 200	< 17.5³ < 1.75	1 10	< 77 + 0-Scope < 11.5	NA 10 - 60	No	4ft (1.2m)
5827	100: 1	300	200	< 1.75	10	< 5.5	15 - 50	No	6.6ft (2.0m)
6069A	10:1	300	250	< 1.40	10	< 10	10 -30	No	4ft (1.2m)
6102A	10:1	300	250	< 1.40	10	< 10	10 - 30	Yes	4ft (1.2m)
5809A	10:1	300	300	< 1.17	10	< 17	10 – 60	No	4ft (1.2m)
5812A	10:1	300	300	< 1.17	10	< 17	10 -60	Yes	4ft (1.2m)

### Replacement Accessory Kit: 6267

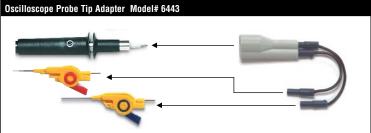
Kit includes:

Retractable Hook Tip BNC Adapter IC Adapter

Insulating Tip

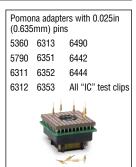
Trimmer Tool 6in (0.15m) Ground Lead with Alligator

gator



This adapter provides an easy, fast, and reliable way to connect your oscilloscope probe to IC test adapters, test clips and grabbers using 0.025in (0.635mm) connection pins.

- 1 Rating: All probes are rated 300V (DC + Peak AC), CAT I, per IEC1010-2-031. Maximum voltage allowed on the LO connection including shell and housing must not exceed 30V.
  - 2 Maximum input voltages are dependent on the oscilloscope input characteristics; take the lesser of the two specifications.
  - 3 Dependent upon oscilloscope input characteristics.
  - 4 Any oscilloscope that uses the Tektronix® style range actuator.



### Modular Passive Oscilloscope Probes



Featuring a new, compact, ergonomically designed probe handle, these modular general purpose passive voltage probes are ideal for use with a wide variety of oscilloscopes. They also feature a spring-loaded, pogo-pin replaceable tip. The fine tip probes are perfectly suited for probing high-density chip leads with less than 0.060in (1.52mm) spacing. Modular in design, the probe handle is capable of receiving a variety of spring-loaded and fixed tips, providing greater testing versatility. An affordable, versatile probe for many uses.

Probe sets feature probe handle, insulated adjusting tool, sprung hook, BNC adapter, 9.06in (230mm) ground lead, 0.98in (25mm) ground adapter, IC tip adapter, tip cover, rigid tip and spring-loaded tip (1 each), and complete set of instructions and specifications.

Model#	Probe Ratio	Maximum Input Voltage CAT II¹	System Bandwidth MHz (-3 dB)	System Risetime (ns)	Probe Input Resistance (M $\Omega$ )	Probe Input Capacitance (pF)	Compensation Range (pF)	Readout Actuator 4	Cable Length
6491	1:1	100 V 2	Up to 25 3	< 14.0 3	1	< 38 + O-Scope	NA	NA NA	4ft (1.2m)
6493	10:1	300 V	60	< 5.90	10	< 10	10 - 60	No	4ft (1.2m)
6494	10:1	300 V	60	< 5.90	10	< 10	10 – 60	Yes	4ft (1.2m)
6499	1:1 10:1	100 V 2 300 V	20 3 60	< 17.5 3 < 5.90	1 10	< 40 + 0-Scope < 10	NA 10 – 60	No	4ft (1.2m)
6495	10:1	300 V	100	< 3.50	10	< 10	10 - 60	No	4ft (1.2m)
6500	1:1 10:1	100 V 2 300 V	20 3 100	< 14.0 3 < 3.50	1 10	< 42 + 0-Scope < 10	NA 10 – 60	No	4ft (1.2m)
6496	10:1	300 V	350	< 1.00	10	< 12	5 – 40	No	4ft (1.2m)
6497	10:1	300 V	350	< 1.00	10	< 12	5 – 40	Yes	4ft (1.2m)
6498	100:1	1.5 kV	350	< 1.20	50	< 6	10 – 50	No	6.6ft (2.0m)
6501	10:1	300 V	350	< 1.00	10	< 12	8 – 45	No	4ft (1.2m)
6492	10:1	300 V	350	< 1.00	10	< 12	8 – 45	Yes	4ft (1.2m)

### Replacement Accessory Kit: 6550

### Kit includes:

Retractable Hook Tip BNC Adapter IC Adapter Insulating Tip Trimmer Tool 6in (0.15m) Ground Lead with Alligator Clip Right-Angle Ground Lead Spring 1 ea. Rigid Probe Tip

1 ea. Spring Probe Tip

Oscilloscope Probe Tip Adapter Model# 6553

This adapter provides an easy, fast, and reliable way to connect your oscilloscope probe to IC test adapters, test clips and grabbers using 0.025in (0.635mm) connection pins.

- Pomona adapters with 0.025in (0.635mm) pins 5360 6351 6442 5790 6352 6444 6311 6353 All "IC" 6312 6490 6151 6313
- 1 Rating: Per IEC1010-2-031. Maximum voltage allowed on the LO connection including shell and housing must not exceed 30V.
- 2 Maximum input voltages are depended on the oscilloscope input characteristics; take the lesser of the two specifications.
- 3 Dependent upon oscilloscope input characteristics.
- 4 Any oscilloscope that uses the Tektronix® style range actuator.

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### Oscilloscope Probes and Accessories

### Microline Passive Oscilloscope Probes



500 MHz x 10 Passive Voltage Probe 4ft (1.2m) cable, 500V peak

The perfect solution for accessing hardto-reach test points, particularly fine pitch IC leads. The Microline Probe features a 500 MHz X10 passive voltage probe compactly designed for on-thego field service or in

Tips can be replaced with Pomona 0.60in (1.52mm) probe tips, see page 67.

Model#	Probe Ratio	Maximum Input Voltage CAT I ¹	System Bandwidth MHz (-3 dB)	System Risetime (ns)	Probe Input Resistance (M W)	Probe Input Capacitance (pF)	Compensation Range (pF)	Readout Actuator	Cable Length
6551	10: 1	500 V	500	< 0.70	10	< 10.5	8 - 20	Yes	4ft (1.2m)
6554	10: 1	500 V	500	< 0.70	10	< 10.5	8 - 20	No	4ft (1.2m)

### Replacement Accessory Kit: 6552

### Kit includes:

Retractable Hook Tip BNC Adapter IC Adapter Insulating Tip Trimmer Tool 6in (0.15m) Ground Lead with Alligator Clip Right-Angle Ground Lead Spring 1 ea. Rigid Probe Tip

1 ea. Rigid Probe Tip 1 ea. Spring Probe Tip



Pomona adapters with

0.025in (0.635mm) pins

- 1 Rating: Per IEC1010-2-031. Maximum voltage allowed on the LO connection including shell and housing must not exceed 30V.
- 4 Any oscilloscope that uses the Tektronix® style range actuator.

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### Insulated Oscilloscope Probes for Portable Applications



These passive voltage oscilloscope probes provide additional safety for portable instrument users. Pomona's Insulated Probes provide insulation coverage for the entire probe including the BNC connector. A spring-loaded sheath covers the tip ground point. Compensation point in BNC end.

- · Offered in two styles: 6006 Fixed Attenuation X10. 6035 Switchable Attenuation X1/X10.
- · Cable length 4ft (1.2m).
- Model 6033 is a set of two 6006 Probes (one red, one gray).

### **Accessories Included:**

Sprung Hook Trimmer Tool IC Tip Insulating Tip BNC Adapter Replacement Tip Ground Lead Sheathed Banana Plug Adapter

Rating: Maximum voltage allowed on the LO connection including shell and housing must not exceed 30V from earth ground.

### Replacement Accessory Kit

### Model# 6034 - \*

\* Std. Colors: -2 Red, -8 Gray

Model#	Attenuation	Bandwidth (MHz)	Resistance (M $\Omega$ )**	Input Impedance Capacitance (pF)	Approx. Risetime (nS)	Voltage (V Max) †	Compensation Range (pF)
6006-*	X10	200	10	15	1.8	250	10-60
6033 (set)	X10	200	10	15	1.8	250	10-60
6035-*	X1/X10	20/200	1/10	47/15	17.5/1.8	250	10-60

- \* -2 Red, -8 Gray \*\* When connected to an oscilloscope with 1 M $\Omega$  input resistance, † Derated with frequency.

# Active Differential Probe

Pomona Model 6731 differential voltage probe allows users to safely make floating high voltage measurements while using general purpose oscilloscopes. Using a built-in differential amplifier, the floating signal is converted and scaled to a low-voltage signal referenced to earth ground. The probe can be used on circuits associated with electronic high-power converters, motor speed controls, switching mode power supplies, and other high voltage circuits requiring isolation.

Features include switchable attenuation, high impedance to ground for both positive and negative side of the balanced input, and maximum differential voltage up to 1000V. The probe input uses shrouded banana test probe tip. The output to the oscilloscope is made with a BNC cable with a safety insulated BNC male connector.

### Included with the 6731:

Large Jaw Alligator clips (one red and one black). Pin-Grabber Test Clips (one red and one black). 9V Alkaline Battery.

### Optional:

Model 6732: Universal Power Adapter.

Input Characteristics	
Input Probe	Shrouded banana test probe
Input Cable Length	60in (1.5m)
Probe Ratio	20:1 / 200:1
Voltage to Ground	600V CAT III 1000V CAT II
Maximum Input	1000 Vdc
Maximum Differential	1000 Vrms
Input Voltage	1200V (DC + Peak AC)
Maximum Floating Voltage / Frequency	600V Category III /400 Hz (from shielding to ground)
Probe Input Resistance	$5 \text{ M}\Omega$ (input to shielding)
i robe input riesistance	10 M $\Omega$ (input to input)
Probe Input Capacitance	6 pF (input to shielding)
	5 pF (input to input)
Operating Temperature	+32°F to +122°F
	(0°C to +50°C)
Output Characteristics	
Output Cable	BNC cable
Output Cable Length	20in (0.5mm)
Output Voltage Range	±6.5V (into 1MW)
Accuracy	±2.5%
Bandwidth	DC to 20 MHz (-3 dB)
Risetime	17.5 ns
CMRR	20:1 @ 60Hz =>70dB
	20:1 @ 1MHz =>40 dB
	200:1 @ 60Hz => 80dB
	200:1 @ 1 MHz =>50dB
Power	
9 V Alkaline Battery	8 hours operation. 400 hours in standby. Unit goes into standby mode after 30 minut

(battery mode only).

For continuous operation

Model 6732 Optional

Universal Power Adapter

### Oscilloscope Probes and Accessories

### RF Detector (demodulator) Probe



### Model# 5815

Model 5815 is a miniature RF Detector Probe intended for use with a wide range of oscilloscopes. This probe is very useful for measuring RF signals up to 800 MHz. It provides an output of 1 Vdc for an input of 1 Vrms sinewave.

Diode Turn-On Voltage: 200 mV. Input Capacitance: 5 pF. Peak AC Input: 50V.

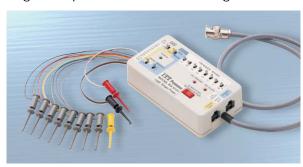
DC Isolation Incl. Peak AC: 200V. Cable Length: 4ft (1.2m). 1 Vdc output for input of 1 Vrms. Bandwidth: 1 MHz - 400 MHz ± 3dB,

500 KHz - 1 MHz ± 4dB, 400 MHz - 800 MHz ± 4dB.

Rating: Maximum voltage allowed on the LO connection including shell and housing must not exceed 30V from earth ground.

Replacement Accessory Kit Model# 6092

### Logic Scope Probe Kit For Analog Oscilloscopes



### Mode# 6004

Pomona's Model 6004 Logic Scope Probe Kit features a pocket-size MX9100 Logic Scope Probe that turns your analog scope into a logic analyzer. A cost-effective instrument for examining and analyzing single-shot and repetitive digital phenomena in the lab or in the field. And with its complement of grabber test leads and a BNC scope interface, the MX9100 Logic Scope Probe is the easy way to evaluate today's newest multifunction IC packages. The MX9100 Logic Scope Probe is packaged in a convenient all-in-one kit, including 11 test leads with Micrograbber® test clips. Also includes: External Trigger Cable Daisy Chain cable.

- · 3-mode operation: logic analyzer, trigger probe, multiplexer (MUX).
- · 20 MHz bandwidth covers most microcontroller frequencies.
- · 8 ns minimum data setup and data hold-time.
- 100 k $\Omega$ /5pF input impedance.
- 800 kHz (approx.) internal clock frequency.
- . Minimum/maximum input levels: low -0.5V to 0.8V, high -2.4V to 6.5V.
- 4.75V to 7V with 190 mA maximum supply current.

Micro SMD Grabber® Test Clip for 0.02in to 0.01in (0.5mm to 0.3 mm) Lead Pitch



- Model# Features Qty 6311 Grabber 2/pk
- · Use with PQFP packages with 0.02in to 0.01in (0.3mm to 0.5mm) lead pitch.
- . Thin body allows an unlimited number of clips to be stacked side by side.
- . Maximum frequency is 100MHz.
- · Supplied with female to male flying leads.

Material: Nickel plated steel wire or stainless steel; Body: ABS

Rating: Hands free testing in controlled voltage environment: 45 Vac; For CE compliance: not intended for hand held use at voltages above 33 Vrms/70 Vdc.

Micro SMD Grabber® Test Clip with Long Tip for 0.03in to 0.02in (0.8mm to 0.5 mm) Lead Pitch



- Model# Qty Features 6312 Grabber w/long tip 2/pk
- · Use with PQFP packages with 0.01in (0.5mm) lead pitch or greater.
- 0.51in (13mm) long tip allows access to hard toreach IC leads.
- . Thin body style allows an unlimited number of clips to be stacked side by side.
- Maximum frequency is 100MHz.
- · Supplied with female to male flying leads.

Material: Teflon™ coated; Tip: nickel plated steel wire or stainless steel; Body: ABS

Rating: Hands free testing in controlled voltage environment: 45 Vac; For CE compliance: not intended for hand held use at voltages above 33 Vrms/70 Vdc.

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